CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 00-132

SITE CLEANUP REQUIREMENTS FOR:
UNITED STATES DEPARTMENT OF THE NAVY
for property located at the
Former MARE ISLAND NAVAL SHIPYARD
VALLEJO, SOLANO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. **Site Location**: Mare Island Naval Shipyard (MINSY) is located along the western limit of the City of Vallejo, in southwestern Solano County. It is approximately 30 miles northeast of San Francisco in the North Bay subregion of the San Francisco Bay Area. Mare Island was historically an island but through land reclamation activities by the Navy, it is now a peninsula approximately 3.5 miles long and 1.25 miles wide. MINSY covers approximately 5,460 acres; 1,650 acres are developed uplands and the remaining acreage is tidal and non-tidal wetlands. Mare Island is bounded on the east by the Mare Island Strait of the Napa River, on the south by the Carquinez Straits, and on the west by San Pablo Bay. To the north, Mare Island is approximately bounded by Highway 37, the Napa Marsh, and the San Pablo Wildlife Refuge. MINSY is within the boundaries of the City of Vallejo but is separated by the Napa River from the downtown area of Vallejo except for two small parcels of property. The first parcel is located at the corner of Tennessee Street and Wilson Avenue and provides the main entrance to the installation via a causeway. The second parcel is the MINSY rail line property that runs through the northern downtown area of the City of Vallejo.

2. **Site History:** MINSY was the first naval station established on the Pacific coast. The United States Department Of The Navy (Navy) purchased 956 acres of land in 1853 and commenced shipbuilding operations in 1854. Industrial activities related to ship building occurred primarily along the northeast shore of Mare Island. Schools, training facilities, residences, and other activities that supported the Navy's mission were established at various locations on Mare Island in the past 147 years. Throughout its history as shipbuilding technologies advanced, the entire shipyard underwent significant transformations and the use of industrial chemicals and oils increased with these changes. MINSY reached its peak capacity for shipbuilding, repair, overhaul, and maintenance during World War II employing over 40,000 workers and constructing nearly 400 ships.

In addition to the industrial activities, the Navy has conducted extensive dredging projects. Starting in the 19th century frequent dredging of the east side of the waterfront adjacent to Mare Island along Mare Island Strait was required to maintain shipping lanes. In this era, significant Sierra mining material traveled downstream and was deposited in San Pablo Bay. Sediments settled out of the water and tended to accrete along the western shoreline in the absence of major streams or sloughs on the western side of Mare Island.

In 1907, the Navy constructed a dike at the south end of the island to reduce the amount of sediment in San Pablo Bay that could be flushed back into Mare Strait with the tide. As a result, sediment accretion along the western shoreline of Mare Island increased, and the island mudflat expanded.

The Navy constructed levees in the mudflat areas along the western shoreline to hold dredge spoils pumped from Mare Island Strait. Large areas of land were reclaimed by filling ponds to the north, west, and south sides of the shipyard with spoils from frequent dredging in the ship channel and pier areas.

The region north of the original island was historically an area of tule marshes. Much of the land area between A Street and Causeway Street was filled with materials excavated during early construction in the original shipyard, such as dry dock excavation and land grading in the area referred to as Dublin Hill (near the northern end of the original island). The land farther north of Causeway Street was primarily reclaimed by filling with dredge spoils and materials from the shipyard.

In addition to shipbuilding, ammunition was manufactured and/or stored at Mare Island throughout most of its naval history. Locations for manufacturing, storing, and handling ordnance were mainly restricted to the southeastern quarter of Mare Island, safety away from the shipyard and residential areas.

The Navy disposed of unwanted ordnance in a variety of ways at Mare Island. After some items were dismantled, the components were burned, buried in onshore dredge ponds, or dumped into the water from the seawalls, piers, and vessels near the southeastern shoreline. Other ordnance items were left intact and dumped overboard with the thought that in time they would deteriorate and become inert; however, some ordnance recovered from the mudflats and shoreline around the southern areas of Mare Island has been live and potentially dangerous.

In 1993, MINSY was identified for closure during the Base Realignment and Closure (BRAC) process. Naval operations ceased and the facility was decommissioned on April 1, 1996. Since that time, the Navy has leased property to the California Conservation Corps, Touro University, and numerous other commercial and industrial businesses. The Navy has transferred environmental clean properties including Roosevelt Terrace, a former housing area, to the City of Vallejo for residential development. Presently, MINSY has approximately 960 buildings representing approximately 10.5 million square

feet of industrial, office, residential, commercial, and recreational facilities.

Under revised environmental regulations, the Navy is now proposing to transfer property where the investigation and/or clean up has not been completed to the satisfaction of the regulatory agencies.

3. **Site Hydrogeology:** MINSY is relatively flat and varies in elevation from sea level to 285 feet above sea level in the southern area of the peninsula. Groundwater at the MINSY occurs within unconfined, unconsolidated alluvial materials and within bedrock units. Groundwater generally flows radially outward from the center of what was historically Mare Island. Hydraulic gradients measured from slug tests ranged between 1.3 and 22.0 feet per day. In the southern area, the unconfined alluvial aquifer rests on top of eroded and fractured basement rock. The depth to groundwater ranges between 3 feet and 15 feet below ground surface. Total dissolved solids concentrations range from below 3000 ppm on the south end of MINSY to over 10,000 ppm towards the northeast boundary of the property.

4. **Environmental Concerns:** In 1996, the Navy completed the "The Final Basewide Environmental Baseline (EBS) /Community Environmental Response Facilitation Act Report". The following sources and/or potential sources of pollution were identified: landfills, military munitions, radioactive materials, Underground Storage Tanks (USTs), fuel distribution pipelines, oil sumps, polychlorinated biphenyls (PCBs), Lead-Based Paint (LBP), Asbestos-containing materials (ACMs), radon, pesticides, herbicides, metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and petroleum.

5. **Regulatory Status**: On September 29, 1992, the United States Department Of The Navy and State Of California Environmental Protection Agency, including the California Regional Water Quality Control Board, San Francisco Bay Region, and the Department Of Toxic Substances Control, Region 2 (the Parties), entered into a Federal Facility Site Remediation Agreement (FFSRA) for MINSY. The agreement was to facilitate full cooperation among the agencies in accelerating and streamlining the remediation process at MINSY to the maximum extent possible consistent with applicable state and federal laws. The Parties intended to use consensus problem solving, to the maximum extent practicable, to achieve the primary goal of environmental restoration.

   Subsequent to the signing of the FFSRA, Section 120(h)(3)(c) of CERLA was revised to grant early transfer authority of contaminated federal property prior to completion of all remedial action. Pursuant to this revision, the Navy is now proposing to transfer property parcels where remediation action has not been completed to the satisfaction of the regulatory agencies or as required under CERCLA and that the remedial action will be preformed by an acquiring party.

   However, the FFSRA does not define how property, transferred prior to completion of all remedial action, will be cleaned up nor does it define the clean up actions of the Navy and

of the acquiring parties. For all non-transferring parcels of property at MINSY, the Navy's cleanup and the regulatory agencies oversight will continue under the FFSRA.

6. **Purpose**: This Order clarifies the Board's regulatory authority and intentions. This order establishes that the Navy will maintain long-term liability for all cleanup, i.e. both non-petroleum and petroleum, of the property transferred prior to completion of cleanup; and notifies any party or parties who acquire parcels of property at MINSY, transferred prior to completion of cleanup, that the Executive Officer may name such acquiring parties to this Order for the parcel(s) of property they acquire.

   This Order also requires a schedule of petroleum cleanup actions for property(ies) proposed for transfer prior to cleanup to insure that the transfer of the property does not substantially delay any necessary response actions. The Department of Toxic Substances Control (DTSC) is expected to be the lead agency in overseeing cleanup of the non-petroleum pollution and establishing the specific schedule of such cleanup actions. However, in the event DTSC cannot satisfactorily address Board's water quality concerns, the Board may exercise its authority to insure the protection of the quality of waters of the State.

7. **Named Discharger**: The United States Department of the Navy is the discharger because it owns the property and owned the property during the time of the activities that resulted in the discharges. The Navy had knowledge of the discharge or the activities that caused the discharge, and had the legal ability to prevent the discharge.

8. **Acquiring Parties Shall Be Named to the Order:** Parties acquiring property with pollution usually assume responsibility for cleaning up the pollution in accordance with California law and State Water Resources Control Board policy. In the event of property transfer at MINSY, the Executive Officer shall amend this order to name acquiring parties of property.

9. **Other Board Regulatory Actions**: This site is also subject to Board orders, as identified below, that address previous operations and activities that are not effected by these clean up requirements:
   - Waste Discharge Requirements (Order No. 97-100 adopted on August 20, 1997);
   - NPDES Permit (Order No. 96-156 adopted on November 20, 1996);
   - Cease And Desist Order (Order No. 89-088 adopted on May 17,1989);
   - Waste Discharge Requirements (Order No. 87-170 adopted on December 16, 1989);
   - Cleanup And Abatement Order (Order No. 85-019 adopted on September 18, 1985).

10. **Land-Use Management:** Land use restriction from the time of transfer to the time of final cleanup, if necessary, must be provided to protect human health and the environment from existing pollution.

11. **Remedial Investigations:** The Navy has performed remedial investigations for a limited number of identified polluted sites within each parcel proposed for transfer.

12. **Interim Remedial Measures**: When polluted sites are transferred before cleanup is completed, an investigation is needed to determine if Interim Remedial Measures should be implemented at those sites to reduce the threat to water quality, public health and the environment posed by the discharge of waste and to provide a technical basis for selecting and designing final remedial measures.

13. **Adjacent Sites**: When polluted sites are transferred before cleanup is completed, the source of pollution under the boundary of the sites must be determined. Those sources and their accompanying plumes should be cleaned up in a manner that does not adversely affect the cleanup of pollution on the adjacent sites.

14. **Basin Plan**: The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. MINSY is located within the Napa-Sonoma Valley Groundwater Basin.

    The existing and potential beneficial uses of groundwater underlying and adjacent to the site include:

    a. Municipal and domestic water supply;
    b. Industrial process water supply;
    c. Industrial service water supply;
    d. Agricultural water supply; and
    e. Freshwater replenishment to surface water.

    The existing and potential beneficial uses of Napa River, San Pablo Bay and contiguous surface waters include:

    a. Cold freshwater habitat;
    b. Commercial and sport fishing;
    c. Estuarine habitat;
    d. Industrial service supply;
    e. Fish migration;
    f. Navigation;
    g. Preservation of rare and endangered species;
    h. Water contact recreation;
    i. Noncontact water recreation;
    j. Shellfish harvesting;
    k. Fish spawning;
    l. Warm freshwater habitat; and
    m. Wildlife habitat.

15. **Other Regional Board Policies:** Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.

    Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally occurring high contaminant levels.

16. **State Water Board Policies**: State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedence of applicable water quality objectives.

    State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304," applies to this discharge. This Order and its requirements are consistent with the provisions of Resolution Nos. 68-16 and 92-49, as amended.

17. **Preliminary Cleanup Goals:** DTSC is the State's lead agency in overseeing cleanup of the site except for the cleanup of petroleum pollution for which the Board is the lead agency. DTSC is expected to follow the CERCLA cleanup procedures and nothing in this Order makes the cleanup levels less stringent than the cleanup levels required under those procedures.

18. **The Board's past experience with groundwater pollution** cases of this type is that it is unlikely that all background levels of water quality can be restored. Under Resolution 92-49 and California regulations, however, no cleanup standards may be set at a level higher than background levels unless or until the following findings can be made and supported by evidence presented to the Board:

    a) that it is technologically or economically infeasible to achieve background level, and

    b) that the pollutant will not pose a substantial present or potential hazard to human health or the environment for the duration of the exceedence of background levels.

19. **Pending the establishment of site-specific cleanup standards,** the following preliminary cleanup goals should be used for these purposes:

a. **Groundwater:** The more stringent of background concentrations or applicable water quality objectives (e.g. maximum contaminant levels, or MCLs) or, in the absence of a chemical-specific objective, risk-based levels (e.g. drinking water equivalent levels) or toxicity testing for aquatic receptors to reflect impacts to surface waters.

b. **Soil:** The more stringent of background concentrations or basin plan limits that are not to exceed 1 mg/kg total volatile organic compounds (VOCs), 10 mg/kg total semi-volatile organic compound (SVOCs) or background concentrations of metals.

20. **Basis for 13304 Order:** The Navy has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.

21. **Federal Waiver of Sovereign Immunity:** The Federal government has waived its sovereign immunity for this Order under Title 42, Section 6991f, of the United States Code.

22. **Cost Recovery:** Pursuant to California Water Code Section 13304, the Navy is hereby notified that the Board is entitled to, and will seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.

23. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.

24. **Notification:** The Board has notified the Navy and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.

25. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the United States Department Of The Navy (or its agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. **DISCHARGE OF WASTE:** The discharge of wastes or hazardous substances in a manner that will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.

2. **POLLUTION MIGRATION:** Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.

3. **POLLUTION MIGRATION CAUSED BY INVESTIGATION AND REMEDIATION:** Activities associated with the subsurface investigation and cleanup, which will cause significant adverse migration of wastes or hazardous substances, are prohibited.

B. TASKS FOR PARCELS TO BE TRANSFERRED FROM THE NAVY BEFORE CLEANUP IS COMPLETED:

1. IDENTIFICATION OF SOURCES

COMPLIANCE DATE: At Least 30 Days Before Proposed Date of Property Transfer

Submit a report, acceptable to the Executive Officer, of all known sources of pollution on the sites to be transferred, including the location, chemicals of concern, concentrations and the extent of the plumes. Also, submit a list, acceptable to the Executive Officer, of all areas where all sources of pollution have not been identified and further assessment and/or investigation of the area is needed.

2. WORKPLAN TO IDENTIFY REMAINING UNKNOWN SOURCES

COMPLIANCE DATE: Within 60 Days After Date of Recordation of the Deed

Submit a workplan, acceptable to the Executive Officer, to inventory chemicals used and to identify all pollution sources on all the areas identified in B.1. above, where all sources of pollution have not been identified and further assessment and/or investigation of the area is needed, including chemical storage areas, sumps, underground tanks, utility lines, and related facilities.

3. **COMPLETION OF REMAINING SOURCE IDENTIFICATION**

COMPLIANCE DATE: Within 60 Days After Task B.2. Compliance Date

Submit a technical report, acceptable to the Executive Officer, documenting completion of necessary tasks identified in the Task B.2. workplan. The technical report should identify confirmed and possible sources of pollution.

4. **WORKPLAN FOR REMEDIAL INVESTIGATION OF PETROLEUM POLLUTION**

COMPLIANCE DATE: Within 30 Days After Task B.3. Compliance Date

Submit a workplan, acceptable to the Executive Officer, to define the vertical and lateral extent of soil and groundwater petroleum pollution down to concentrations at or below typical cleanup standards for soil and groundwater. The workplan should specify investigation methods and a proposed time schedule.

5. **COMPLETION OF REMEDIAL INVESTIGATION OF PETROLEUM POLLUTION**

COMPLIANCE DATE: Within 120 Days After Task B.4. Compliance Date

Submit a technical report, acceptable to the Executive Officer, documenting completion of necessary tasks identified in the Task B.4. workplan.

6. **INTERIM REMEDIAL ACTION WORKPLAN FOR PETROLEUM POLLUTION**

COMPLIANCE DATE: Within 30 Days After Task B.5. Compliance Date

Submit a workplan, acceptable to the Executive Officer, to evaluate interim petroleum pollution remedial action alternatives and to recommend one or more alternatives for implementation. Work may be phased to allow the investigation to proceed efficiently. If groundwater extraction is selected as an interim remedial action, then one task will be the completion of an NPDES permit application for discharge of extracted, treated groundwater to waters of the State. The application must demonstrate that neither reclamation nor discharge to the sanitary sewer is technically or economically feasible. *(Note: the NPDES permit application for most discharges will be a "notice of intent" to be covered by the VOC general permit)*

7. **COMPLETION OF INTERIM REMEDIAL ACTIONS FOR PETROLEUM POLLUTION**

COMPLIANCE DATE: Within 90 Days After Task B.6. Compliance Date

Submit a technical report, acceptable to the Executive Officer, documenting completion of necessary tasks concerning petroleum pollution identified in the Task B.6. workplan. For ongoing actions, such as soil vapor extraction or groundwater extraction, the report should document start-up as opposed to completion.

8. **PROPOSED FINAL REMEDIAL ACTIONS AND PETROLEUM POLLUTION CLEANUP STANDARDS**

COMPLIANCE DATE: Within 30 Days After Task B.7. Compliance Date

Submit a technical report, acceptable to the Executive Officer, containing:

a. Evaluation of the installed interim remedial actions;
b. Feasibility study evaluating alternative final remedial actions;
c. Risk assessment for current and post-cleanup exposures;
d. Recommended final remedial actions and cleanup standards;
e. Implementation tasks and time schedule.

Item c should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action.

Items a through c should be consistent with the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), CERCLA guidance documents with respect to remedial investigations and feasibility studies, Health and Safety Code Section 25356.1(c), and State Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

Item e should consider the preliminary cleanup goals for soil and groundwater identified in finding 19 and should address the attainability of background levels of water quality (see finding 16).

9. **SITE STATUS REPORTS**

COMPLIANCE DATE: Quarterly reports beginning February 1, 2001

Submit Quarterly Site Status Reports, acceptable to the Executive Officer, that provides data with an analysis of how the work completed in the past quarter complies with this Order and a schedule of the work planned for the next quarter. The reports shall be signed under penalty of perjury.

10. **DELAYED COMPLIANCE:** If the Navy is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Navy shall promptly notify the Executive Officer. If, for any reason, the Navy is unable to perform any activity or submit any document within the time required under this Order, the Navy

shall make a written request for a specified extension of time. The extension request shall include a justification for the delay, and shall be submitted in advance of the date on which the activity is to be performed or the document is due.

C. PROVISIONS

1. **No Nuisance**: The storage, handling, treatment, or disposal of polluted soil or groundwater shall be conducted in a manner such that it would not create a nuisance as defined in California Water Code Section 13050(m).

2. **Good Operation and Maintenance (O&M)**: The Navy shall maintain in good working order and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

3. **Reimbursement:** The Navy will pay the full costs incurred by the Regional Board in monitoring and enforcing cleanup at this site and for oversight of this order.

4. **Access to Site and Records**: In accordance with California Water Code Section 13267(c), the Navy shall permit the Board or its authorized representative:

   Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, that are relevant to this Order.

   Access to copy any records required to be kept under the requirements of this Order.

   Inspection of any monitoring or remediation facilities installed in response to this Order.

   Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the Navy.

5. **Lab Qualifications**: State-certified laboratories, or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed, shall analyze all samples. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).

6. **Document Distribution**: Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
   a. MINSY Public Repository, JFK Library, 505 Santa Clara St., Vallejo, California.
   b. City of Vallejo, Department of Community Development, Vallejo, California.
   c. Cal/EPA-Department of Toxic Substances Control, Berkeley, California.
   d. U.S. Environmental Protection Agency, Region 9, San Francisco, California.
   e. California Regional Water Quality Control Board, Region 2, Oakland CA. [The Executive Officer may modify this distribution list as needed.]

7. **Reporting of Changed Owner or Operator**: The Navy shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order within fifteen days of the date of the change.

8. **Reporting of Hazardous Substance Release**: If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the Navy shall report such discharge to the Regional Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 AM to 5:00 PM).

   A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

   This reporting is in addition to the reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

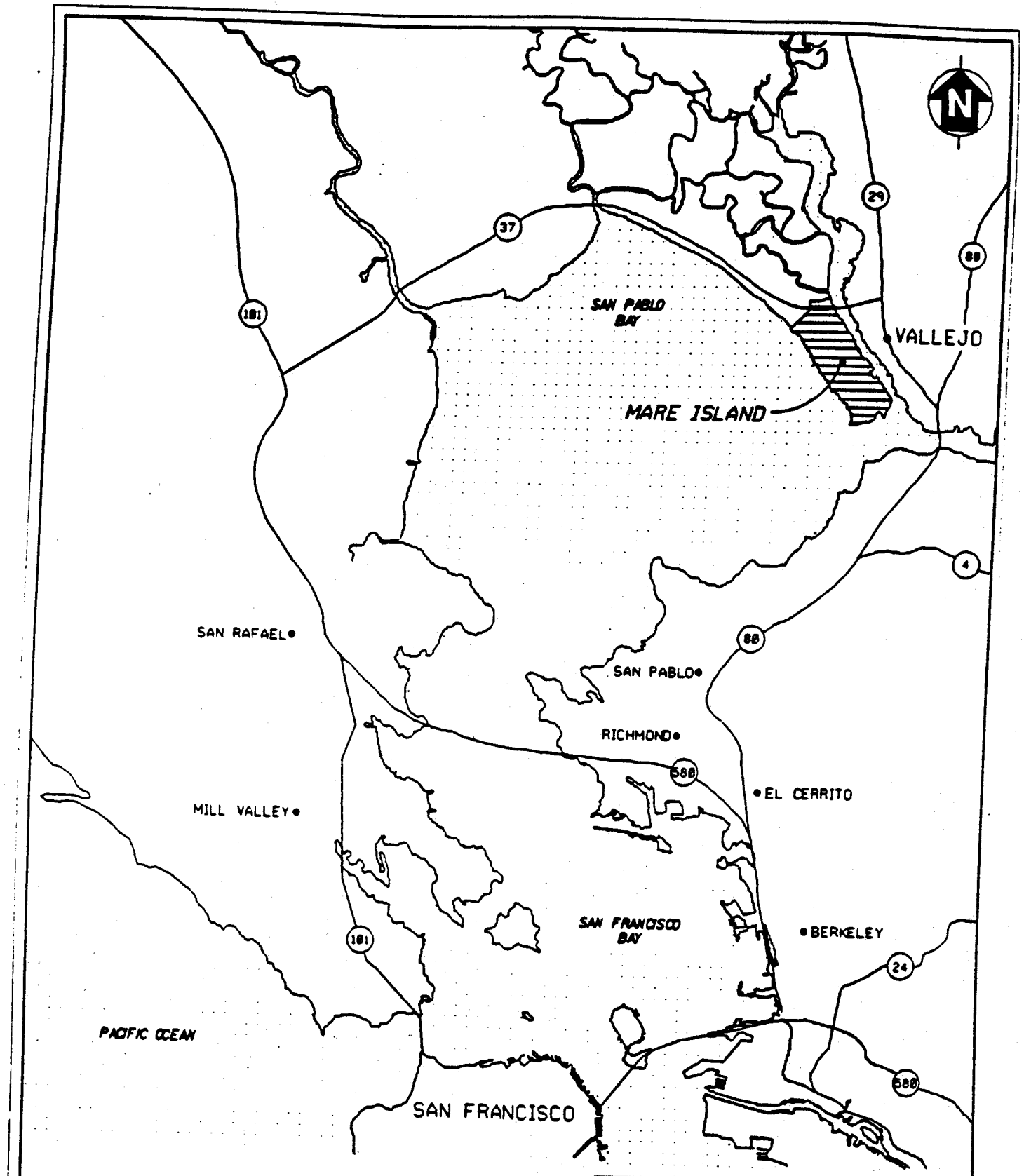
9. **Periodic SCR Review**: The Board will review this Order periodically and may revise it when necessary. The Navy may request revisions and upon review, the Executive Officer may recommend that the Board revise these requirements.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 29, 2000.

for Loretta K. Barsamian
Executive Officer

FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

Attachment A: Mare Island Naval Shipyard, Vicinity Site Map



REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

FIGURE 1-1

MARE ISLAND
LOCATION MAP

NOT TO SCALE